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EXAMINER

MISLEH, JUSTIN P

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 08/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,426

Applicant(s)

MORI ET AL. 

Examiner

Justin P Misleh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 - 4 is/are rejected.
- 7) ☒ Claim(s) 5 - 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>5 and 6</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

2. **Figure 7** should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the Examiner, the Applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claim 4** recites the limitation "wherein the reference upper-portion/lower-portion ratio is made lower when the second condition was recognized last time than when the first or third condition was recognized" therein. There is insufficient antecedent basis for this limitation in the claim.

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More specifically, the phrase "last time" is open-ended and does not refer back to a particular point in time (i.e. a first time). For the purposes of examination, the Examiner will interpret Claim 4 according to the following language: "wherein the reference upper-portion/lower-portion ratio is determined for each image frame."

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1 and 2** are rejected under 35 U.S.C. 102(b) as being anticipated by Naruto et al.

7. For **Claim 1**, Naruto et al. disclose, as shown in figures 9, 11, and 12 and as stated in columns 10 (lines 49 – 54) and 11 (lines 3 – 36), a camera (see figure 9) that controls exposure of an image sensor (CCD 1) in such a way that apparent brightness of a subject in a photographed picture is substantially constant regardless of actual brightness of the subject, wherein the camera controls the exposure of the image sensor according to a result of distinguishing (according to flowchart of figure 12) among a first condition (YES of Step #5 → Step #6) in which there is little difference in brightness between the subject and a background (Front Light w/ Low Brightness), a second condition (NO of Step #5 → Step #11) in which there is much difference in brightness between the subject and the background and in which the subject is less bright than the background (Front Light w/ High Brightness), and a third condition

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(NO of Step # 2 → Step # 14) in which there is much difference in brightness between the subject and the background and in which the subject is brighter than the background (Backlight).

Naruto et al. teach that the brightness of an object located at the center of the picture is measured and assigned to B_{VS} and that the brightness of an object at the peripheral of the picture is measured and assigned to B_{VA} . In Steps #1 and #2 of the flowchart of figure 12, is it initially determined whether it is a Front Light situation, corresponding to the path from YES of Step #2 → Step #5 or a Back Light situation (including all light that is not front light), corresponding to the path from NO of Step#2 → end. Furthermore, once it has been determined to be a Front Light situation, it is further determined whether the Front Light is Front Light w/ Low Brightness (Normal) or Front Light w/ High Brightness (Excessive). The first, second, and third conditions correspond to Front Light w/ Low Brightness (Normal), Front Light w/High Brightness (Excessive), and Backlight, respectively.

8. As for **Claim 2**, Naruto et al. teach that the first, second, and third conditions correspond to Front Light w/ Low Brightness (Normal), Front Light w/High Brightness (Excessive), and Backlight, respectively. As required by the claim language, the fourth condition includes the first condition (Normal Front Light) and the second condition (Excessive Front Light), and the fifth condition includes the first condition (Normal Front Light) and third condition (Back Lighting). The fourth condition yields a strictly front light situation since it is comprised of two front light situations. The fifth condition yields whatever else does not qualify as front light, since it is comprised of a front situation and a backlight situation. Naruto et al. accurately disclose this feature as follows: In Steps #1 and #2 of the flowchart of figure 12, is it initially determined whether it is a Front Light situation, corresponding to the path from YES of Step #2

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→ Step #5 or a Back Light situation (including all light that is not front light), corresponding to the path from NO of Step#2 → end.

Therefore, fourth condition corresponds to the path from YES of Step #2 → Step #5 and the fifth condition corresponds to the path from No of Step #2 → Step #14 and each of the five conditions are distinguished from each other.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 3 and 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over Naruto et al. in view of Mori et al.

11. As for **Claim 3**, Naruto et al. disclose, as shown in figure 11 and as stated in column 10 (lines 49 – 54), wherein an area to be photographed is divided into two portions, a brightness of an object at the center of the picture is averaged and a brightness of an object at the peripheral of the picture is averaged. Furthermore, as stated above, Naruto et al. teach that a fourth condition corresponds to a backlight situation and a fifth condition corresponds to a front light situation.

However, Naruto et al. do not disclose wherein an area to be photographed is divided into two, an upper and a lower, portions each further divided into a plurality of regions, and the camera determines brightness in each of those regions and then determines an upper-portion average, which is an average of brightness in the regions belonging to the upper portion, and a

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lower-portion average, which is an average of brightness in the regions belonging to the lower portion, so that the camera recognizes the fourth condition when an upper-portion/lower-portion ratio, which is a ratio of the upper-portion average to the lower-portion average, is higher than a predetermined reference upper-portion/lower-portion ratio and recognizes the fifth condition when the upper-portion/lower-portion ratio is not higher than the reference upper-portion/lower-portion ratio.

On the other hand, Mori et al. also disclose a camera that controls the exposure of an image sensor. More specifically, Mori et al. teach, as shown in figures 10 – 13 and as stated in column 12 (line 34) – column 14 (line 21), wherein an area to be photographed is divided into two (see figure 11A), an upper and a lower portion (upper region and lower region) each further divided into a plurality of regions (see figure 11B), and the camera (see figure 10) determines brightness in each of those regions and then determines an upper-portion average, which is an average of brightness in the regions belonging to the upper portion (17), and a lower-portion average, which is an average of brightness in the regions belonging to the lower portion (17), so that the camera recognizes the fourth condition (backlight) when an upper-portion/lower-portion ratio, which is a ratio of the upper-portion average to the lower-portion average, is higher than a predetermined reference upper-portion/lower-portion ratio and recognizes the fifth condition (front light) when the upper-portion/lower-portion ratio is not higher than the reference upper-portion/lower-portion ratio (see column 13, lines 23 – 53).

As stated in column 3 (lines 1 – 13), at the time the invention was made, one with ordinary skill in the art would have been motivated to include wherein an area to be photographed is divided into two, an upper and a lower, portions each further divided into a

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plurality of regions, and the camera determines brightness in each of those regions and then determines an upper-portion average and a lower-portion average so that the camera recognizes the fourth condition when an upper-portion/lower-portion ratio is higher than a predetermined reference upper-portion/lower-portion ratio and recognizes the fifth condition when the upper-portion/lower-portion ratio is not higher than the reference upper-portion/lower-portion ratio, as taught by Mori et al., in the camera, or Naruto et al., as a means to provide camera exposure control by avoiding saturation due to over correction of the image as a result of using peripheral/center brightness measuring portions.

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included include wherein an area to be photographed is divided into an upper and a lower portions, determining the brightness in each of those regions and then determining an upper-portion average and a lower-portion average so that the camera recognizes the fourth condition and a fifth condition based upon the upper-portion/lower-portion ratio, as taught by Mori et al., in the camera, or Naruto et al.

12. As for **Claim 4** (please see objection above), Mori et al. teach, as stated in column 13 (liens 44 – 53), wherein the reference upper-portion/lower-portion ratio is determined for each image frame.

Allowable Subject Matter

13. **Claims 5 – 9** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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14. As for **Claims 5 and 9**, while the prior art discloses determining the average brightness in a peripheral portion, a center portion, an upper portion, and a lower portion of an area of an image to be photographed, the prior art does not teach or fairly suggest wherein the camera determines an overall average, which is an average of brightness over all the regions, a first dark-region average, which is an average of brightness in regions in which brightness is lower than the overall average, and a second dark-region average, which is an average of brightness in regions in which brightness is lower than the first dark-region average so that, when the fourth condition has been recognized, the camera recognizes the first condition when a first overall/dark-region ratio, which is a ratio of the overall average to the first dark-region average, is not higher than a first reference overall/dark-region ratio or when a second overall/dark-region ratio, which is a ratio of the overall average to the second dark-region average, is not higher than a second reference overall/dark-region ratio and recognizes the second condition when the first overall/dark-region ratio is higher than the first reference overall/dark-region ratio and in addition the second overall/dark-region ratio is higher than the second reference overall/dark-region ratio..

15. As for **Claim 7**, while the prior art discloses determining the average brightness in a peripheral portion, a center portion, an upper portion, and a lower portion of an area of an image to be photographed, the prior art does not teach or fairly suggest wherein the camera determines an overall average, which is an average of brightness over all the regions, a dark-region average, which is an average of brightness in regions in which brightness is lower than the overall average, and a bright-region average, which is an average of brightness in regions in which brightness is higher than the overall average so that, when the fifth condition has been

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recognized, the camera recognizes the first condition when a bright-region/dark-region ratio, which is a ratio of the bright-region average to the dark-region average, is not higher than a predetermined reference bright-region/dark-region ratio and recognizes the third condition when the bright-region/dark-region ratio is higher than the reference bright-region/dark-region ratio.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following is a brief description of the cited prior art as labeled on form PTO-892.

- **Prior Art C, D, and E** all disclose, in the very least, a camera with exposure control means that distinguishes between a normal (uniform) light condition, a front light condition, and a backlight situation.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 703.305.8090. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 5:30 PM and on alternating Fridays from 7:30 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wendy R Garber can be reached on 703.305.4929. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM
July 26, 2004


NGOC-YEN VU
PRIMARY EXAMINER